

**What is claimed is:**

1. A method for selling fuel to a vehicle, wherein the method comprises the steps of:  
 storing vehicle specific data in the vehicle;  
 transmitting said data from the vehicle to a fuel pump computer; and  
 determining, at least partially, by said fuel pump computer, a per unit price of  
 the fuel sold to said vehicle, using said data.
2. The method of claim 1, wherein the data comprises a value indicative of how far the  
 vehicle is capable of going on a unit of fuel.
3. The method of claim 1, wherein the data comprises a value indicative of the weight of  
 the vehicle.
4. The method of claim 1, wherein the data comprises a value indicative of the amount  
 of at least one chemical composition emitted by the vehicle.
5. The method of claim 1, wherein the data comprises a vehicle identification number.
6. The method of claim 1, wherein the data comprises an indicator that the vehicle is  
 capable of using fuel which is at least partially comprised of a renewable resource.
7. The method of claim 1, wherein the data comprises an indicator that the vehicle is a  
 hybrid gasoline/electric vehicle.
8. The method of claim 1, wherein the step of determining a per unit price of fuel sold to  
 said vehicle further comprises searching a lookup table for vehicle specific data in order to  
 determine a per unit price for fuel for the vehicle.

1 9. The method of claim 1, wherein the step of determining a per unit price of fuel sold to  
2 said vehicle further comprises use of an equation which utilizes said vehicle specific data to  
3 at least partially determine the per unit price for the fuel sold to the vehicle.

1 10. The method of claim 1, wherein the step of determining a per unit price of fuel sold to  
2 said vehicle further comprises the use of a database query which utilizes said vehicle specific  
3 data to at least partially determine the per unit price for the fuel sold to the vehicle.

1 11. The method of claim 1, wherein the step of transmitting said data uses wireless  
2 means.

1 12. The method of claim 11, further comprising a step of periodically verifying that the  
2 fuel being delivered is being pumped into the vehicle from which the vehicle specific data was  
3 used to determine the per unit price.

1 13. The method of claim 12, further comprising a step wherein a computer in the vehicle  
2 receives information on fuel level in a fuel tank in the vehicle and periodically transmits said  
3 fuel level or a rate of change of said fuel level to the fuel pump computer; said fuel pump  
4 computer using said transmitted fuel level or said rate of change of fuel level to verify that the  
5 per unit price is correct for the vehicle being fueled.

1 14. The method of claim 1, wherein the step of transmitting said data from the vehicle is  
2 by means of an electrical coupling comprising a signaling cable, a plug at an end of the  
3 signaling cable, and a jack on the vehicle to be fueled; said jack being electrically coupled to a  
4 device containing said data in the vehicle.

15. The method of claim 1, wherein the step of transmitting said data from the vehicle is by means of a magnetic transducer placed on a portion of a nozzle which is inserted into a fuel filler pipe on the vehicle; said magnetic transducer reading the vehicle data from one or more encoded magnetic strips situated in a portion of the fuel filler pipe through which the magnetic transducer passes; and wherein said data received by the fuel pump computer travels over a signaling cable between said magnetic transducer and said fuel pump computer.

16. The method of claim 15, further comprising a step wherein if fueling is suspended for a predetermined time, said nozzle must be reinserted past said encoded magnetic strips in order to resume receiving fuel at the determined per unit price.

17. The method of claim 1, wherein the step of transmitting said data from the vehicle is done by optically reading a bar code; said bar code being physically located inside the fuel filler pipe and read by a light source and a light receptor on the fuel nozzle; and wherein said data travels via a signaling cable between said light receptor and said fuel pump computer.

18. The method of claim 1, wherein the step of transmitting said data from said vehicle is by means of infrared data transmission sent from a sending unit on the vehicle to a receiving unit on the fuel nozzle.

19. The method of claim 1, further comprising the step of displaying to the customer the per unit fuel price.

20. The method of claim 19, further comprising the step of displaying an explanation of how the per unit fuel price was determined.

1        21.    The method of claim 1, wherein the step of storing said vehicle specific data is  
2 performed under the direction of a regulatory agency after the vehicle has been purchased by  
3 the customer.

1        22.    An apparatus for selling fuel to a vehicle, comprising:  
2                a storage device for storing vehicle specific data within said vehicle;  
3                a transmitter for transmitting said data to a fuel vendor; and  
4                a fuel pump computer, which determines a per unit price for the fuel, using,  
5                at least in part, said data.

1        23.    The apparatus of claim 22, wherein the storage device is a semiconductor memory.

1        24.    The apparatus of claim 22, wherein the storage device is comprised of magnetic  
2 material.

1        25.    The apparatus of claim 24, wherein the magnetic material is positioned inside a fuel  
2 filler pipe on said vehicle, and is of a substantially cylindrical or partially cylindrical shape.

1        26.    The apparatus of claim 25, further comprising a substantially cylindrical or partially  
2 cylindrical collar positioned and affixed between said magnetic material and the inside wall of  
3 said fuel filler pipe; said collar being made of a nonferrous material and of suitable thickness  
4 to prevent shunting of magnetic fields of said magnetic material by said fuel filler pipe.

1        27.    The apparatus of claim 26, further comprising a magnetic transducer affixed to a fuel  
2 nozzle; said transducer capable of reading information encoded upon said magnetic material  
3 as said nozzle is inserted into said fuel filler pipe and past the magnetic material.

1 28. The apparatus of claim 22, wherein the storage device is an optically readable bar  
2 code.

1 29. The apparatus of claim 28, wherein the bar code is printed, engraved, or painted on  
2 the inside wall of a fuel filler pipe on said vehicle.

1 30. The apparatus of claim 29, further comprising a light source and a light receptor on a  
2 fuel nozzle; said light source capable of illuminating said bar code, and said receptor capable  
3 of detecting and reading said bar code as said nozzle passes the bar code as said nozzle is  
4 inserted into said fuel filler pipe.

1 31. The apparatus of claim 28, wherein the bar code is printed, engraved, or painted on a  
2 substantially cylindrical or partially cylindrical collar which is positioned and affixed inside a  
3 fuel filler pipe on said vehicle.

1 32. The apparatus of claim 31, further comprising a light source and a light receptor on a  
2 fuel nozzle; said light source capable of illuminating said bar code, and said receptor capable  
3 of detecting and reading said bar code as said nozzle passes the bar code as said nozzle is  
4 inserted into said fuel filler pipe.

1 33. The apparatus of claim 22, wherein said transmitter is wireless.

1 34. The apparatus of claim 33, further comprising a fuel sensor in the vehicle; a computer  
2 in the vehicle which is electrically coupled to and which periodically reads fuel quantity  
3 information from said fuel sensor; said computer in the vehicle further being coupled to a  
4 wireless interface unit which controls a first wireless unit in said vehicle; said first wireless  
5 unit being in communication with a second wireless unit on a fuel pump; said second wireless  
6 unit being electrically coupled to said fuel pump computer; said fuel quantity information

7 transmitted from said computer in the vehicle through said wireless interface unit to said first  
8 wireless unit, and from said first wireless unit to said second wireless unit, and from said  
9 second wireless unit to said fuel pump computer.

1 35. The apparatus of claim 22, wherein the transmitter comprises an infrared transmitter  
2 on said vehicle and an infrared receptor attached to a fuel pump nozzle.

1 36. The apparatus of claim 22, wherein said fuel pump computer contains a program in a  
2 memory; said program, when executed by said fuel pump computer, being capable of  
3 determining a per unit price of fuel sold to the vehicle, using some or all of said vehicle  
4 specific data, and at least one rule authorized by a regulatory agency.